

529021
(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
8 April 2004 (08.04.2004)

PCT

(10) International Publication Number
WO 2004/029341 A1

(51) International Patent Classification⁷:
D04H 1/54, C08L 23/10

D01F 6/46,

(74) Agent: FISAULI, Beatrice; Basell Poliolefine Italia
S.p.A, Intellectual Property, Via Pergolesi, 25, I-20124
Milano (IT).

(21) International Application Number:

PCT/EP2003/010705

(81) Designated States (national): JP, US.

(22) International Filing Date:

23 September 2003 (23.09.2003)

(84) Designated States (regional): European patent (AT, BE,
BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU,
IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

02021420.1 25 September 2002 (25.09.2002) EP
60/416,988 8 October 2002 (08.10.2002) US

Declarations under Rule 4.17:

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations
- of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(71) Applicant (for all designated States except US): BASELL
POLIOLEFINE ITALIA S.P.A. [IT/IT]; Via Pergolesi,
25, I-20124 Milano (IT).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SARTORI, Franco
[IT/IT]; Via A. M. Mozzoni, 1, I-44100 Ferrara (IT). SAR-
TORI, Gabriella [IT/IT]; Via Piave, 2, I-45030 S. Maria
Maddalena (IT).

WO 2004/029341 A1

(54) Title: POLYPROPYLENE FIBRES SUITABLE FOR THERMALLY BONDED NON-WOVEN FABRICS

(57) **Abstract:** A fibre for thermal bonding comprising a propylene polymer composition having an MFR value from 4 to 50 g/10 min. The said composition is selected from (i) a crystalline propylene random copolymer or polymer composition containing at least 0.8% by weight of ethylene and optionally one or more C₄-C₁₀ α -olefins and having a melting temperature of 155° C or higher, a content of fraction soluble in xylene at room temperature lower than 5 wt%, a value of the ratio of the polymer fraction collected at the temperature range from 25° to 95° C by TREF with xylene to the xylene soluble fraction, higher than 8; and (ii) a crystalline propylene polymer composition having a melting temperature of 153° C or higher, a content of fraction soluble in xylene at room temperature lower than 10 wt% and containing at least 0.64 wt% of ethylene and/or C₄-C₁₀ α -olefin recurring unit and comprising (I) 20-80 wt% of a crystalline propylene homopolymer and/or crystalline propylene random copolymer containing up to 1.5% by weight of ethylene and/or C₄-C₁₀ α -olefin and (II) 20-80 wt% of a crystalline random copolymer of propylene with ethylene or a C₄-C₁₀ α -olefin. A polymer composition having an MFR value from 4 to 50 g/10 min, an ethylene content of at least 0.64 wt% and comprising (A) 20-80 wt% of a crystalline propylene homopolymer or crystalline propylene random copolymer containing up to 1.5 wt% of ethylene and/or C₄-C₁₀ α -olefin and (B) 20-80 wt% of a crystalline random copolymer of propylene with higher than 5 to 9 wt% of ethylene. Non-woven fabrics that are prepared with the said fibres are useful for hygienic applications.